

SPECIAL HEALTH NEEDS

The following is standard language required by the USEPA for inclusion in all US water agency annual water quality reports

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly people, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 800-426-4791 or at www.epa.gov/safewater.

CONSUMER CONFIDENCE REPORT

A public service provided by the City of San Bruno, the Peninsula City of choice in which to live, learn, work, shop and play.

The City of San Bruno is proud to provide our customers with the annual Consumer Confidence Report (CCR). This year’s report is in compliance with new regulations of the 1998 Safe Drinking Water Act (SDWA) reauthorization, which charges the U.S. Environmental Protection Agency (USEPA) with updating and strengthening the tap water regulatory program. This report presents water quality and supply information for 2012. During 2012, the City and the San Francisco Public Utilities Commission (SFPUC) monitored the water quality of both source and treated water supplies. The City of San Bruno wants you, our customer, to know that your water system has met all water quality standards established by the USEPA and the California Department of Public Health (CDPH).

HOW CAN THE PUBLIC BE INVOLVED?

Meetings of the City of San Bruno City Council begin at 7:00 PM on the second and fourth Tuesdays of each month and are open to the public. Meetings are held at the San Bruno Senior Center located at 1555 Crystal Springs Road.

If you have any questions or need further information, please feel free to contact the City of San Bruno Water Division at (650) 616-7162, or by mail at City of San Bruno Water Division, 567 El Camino Real, San Bruno, CA 94066-4247. A copy of the 2012 Consumer Confidence Report will also be posted on the City’s website at www.sanbruno.ca.gov.

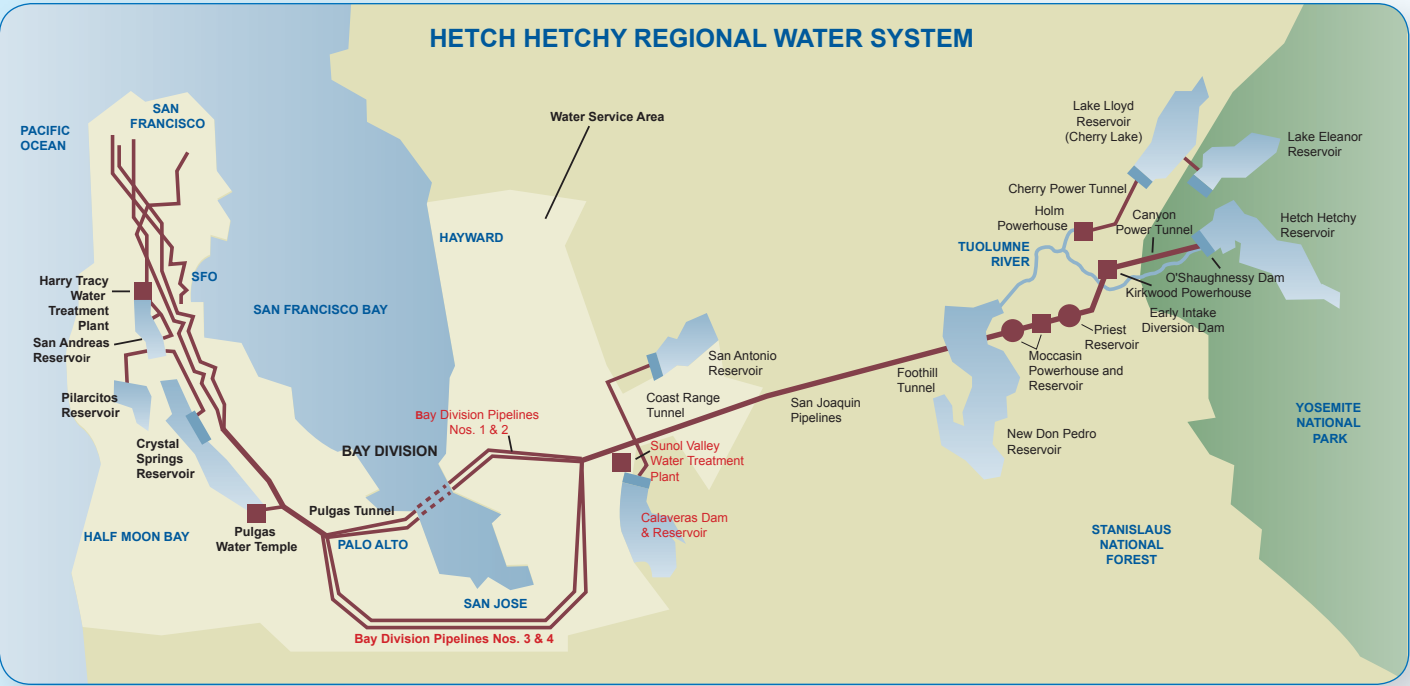
Decisions about SFPUC water quality issues are made from time to time in public meetings held at San Francisco City Hall, 1 Doctor Carlton B. Goodlett Place, Room 400, San Francisco CA 94102. Inquiries about these meetings may be directed to the Office of the Commission Secretary at (415) 554-3165. Additional information about the SFPUC water quality may be obtained by calling (877) 737-8297, or by going to their website at www.sfwater.org.

TANSLATION LANGUAGES

This report contains important information about your drinking water. Translate it, or speak with someone who understands it. Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

此份有關你的食水報告,內有重要資料和訊息,請找他人為你翻譯及解釋清楚。

此份有关你的食水报告,内有重要资料和讯息,请找他人为你翻译及解释清楚。



ANNUAL WATER QUALITY REPORT 2012

WHERE THE CITY'S WATER SUPPLY COMES FROM

Throughout this report customers will be able to find useful information specifically related to the City of San Bruno water system, as well as information related to drinking water in general. The primary mission of this report is to summarize the past year’s water quality data that are found in the tables at the end of this brochure. You will also find valuable information about City’s current operations as well as future changes or improvements to the water system. The City of San Bruno continues its commitment to provide you with safe, high quality drinking water.

The water supply for the City of San Bruno is derived from two sources. Approximately 50% of the daily water demand comes from four of the City’s groundwater wells, the other half is purchased from the San Francisco Public Utilities Commission (SFPUC).

The sources of drinking water (both tap water and bottled water) include rivers, lakes, oceans, streams, ponds, reservoirs, springs, and wells. For our system, the major water source originates from spring snowmelt flowing down the Tuolumne River to storage in Hetch Hetchy Reservoir. Our pristine Sierra water source meets all federal and state criteria for watershed protection. We also maintain stringent disinfection treatment practices, extensive bacteriological-quality monitoring, and high operational standards. As a result, the United States Environmental Protection Agency (USEPA) and California Department of Public Health (CDPH) have granted that no filtration is required for the Hetch Hetchy water source. In other words, the source is so clean and protected that we are not required to filter water from Hetch Hetchy Reservoir. Hetch Hetchy water is supplemented with surface water from two local watersheds. Rainfall and runoff from the Alameda Watershed—within the greater 128,424-acre Southern Alameda Creek Watershed and spanning more than 35,000 acres in Alameda and Santa Clara counties—are collected in the Calaveras and San Antonio reservoirs for filtration and disinfection at the Sunol Valley Water Treatment Plant. Rainfall and runoff from the 23,000-acre Peninsula Watershed in San Mateo County are stored in the Crystal Springs, San Andreas, and Pilarcitos reservoirs, and are filtered and disinfected at the Harry Tracy Water Treatment Plant. In 2012, the Hetch Hetchy Watershed provided the majority of our total water supply, with the remainder contributed by the two local watersheds.



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Water Division  
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## WATER SYSTEM OPERATIONS

Effective operation and maintenance of the distribution system ensures that the water maintains its quality as it travels through the system to your tap. The disinfectant residual in the water after treatment prevents the re-growth of microbial organisms during storage and transmission of water in the distribution system. The flushing of City’s water mains and rotation of stored supplies also keeps the water fresh and limits the possibility for growth of such organisms.

The San Bruno Water Division conducts a comprehensive water quality assurance program. We collect over fifty samples a month throughout our system and send them to a state certified laboratory for testing. All samples have tested negative for coliforms and met all water quality standards in 2012. Other water samples are collected periodically to check for levels of lead and copper, disinfection by-products [trihalomethanes and haloacetic acids – THMs and HAAs] and general physical components as required by state and federal regulations. The San Bruno Water Division daily maintains water quality at our well facilities, SFPUC turnouts, all storage tanks, and pump stations throughout the distribution system. These sites are monitored and maintained by City staff and our computerized SCADA (Supervisory Control and Data Acquisition) system that provides our water division managers with continuous automated water quality information.

In addition, The City of San Bruno Water Division, along with the San Mateo County Environmental Health Department administers and manages a cross- connection prevention program to eliminate possible contamination to our drinking water through backflow prevention devices. The program includes yearly testing of all city-owned backflow devices and monitoring of compliance on privately owned back flow devices\*.

*\* A note to residents and business owners who have backflow prevention devices: State regulations require that all backflow prevention devices be tested annually by a certified inspector.*

## WATER QUALITY

SFPUC’s Water Quality Division (WQD) regularly collects and tests water samples from reservoirs and designated sampling points throughout the system to ensure the water delivered to you meets or exceeds federal and state drinking water standards. In 2012, WQD staff conducted more than 108,500 drinking water tests in the transmission and distribution systems. This is in addition to the extensive treatment process control, monitoring performed by our certified operators and online instruments. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Such substances are called contaminants. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, the USEPA and CDPH prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that provide the same protection for public health. More information about contaminants potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline **800-426 4791**

## CONTAMINANTS THAT MAY BE PRESENT IN SOURCE WATER INCLUDE:

**Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

**Inorganic contaminants**, such as salts and metals, that can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

**Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

**Organic chemical contaminants**, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

**Radioactive contaminants**, that can be naturally occurring or be the result of oil and gas production and mining activities.

## EMERGING CONTAMINANT MONITORING

Unregulated microorganisms and synthetic or naturally-occurring chemicals that are not commonly monitored by water utilities are termed contaminants of emerging concern (CEC). More than 100,000 chemicals are registered in the US, and new chemicals are registered and new microorganisms are identified everyday. Some of these contaminants can be detected at extremely low levels in the environment by ever-improving laboratory methods. The health significance of these trace contaminants is typically unknown. We are proactively addressing CEC through participation in national research projects and conducting independent monitoring of our source waters. To learn more, visit [www.sfwater.org/CEC](http://www.sfwater.org/CEC).

## REDUCING LEAD FROM PLUMBING FIXTURES

Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. There are no known lead service lines in our water distribution system. We are responsible for providing high-quality drinking water, but cannot control the variety of materials used in plumbing components. Lead levels at your home may be higher than at other homes as a result of materials used in your home’s plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are typically more vulnerable to lead in drinking water than the general population. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead levels in your home’s water, you may wish to have your water tested. Additional information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the USEPA Safe Drinking Water Hotline **(800) 426-4791**, or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## KEY WATER QUALITY TERMS

Following are definitions of key terms noted on the adjacent water quality data table. These terms refer to the standards and goals for water quality described below.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the USEPA.

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs or MCLGs as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

**Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Turbidity:** A water clarity indicator that is also used to indicate the effectiveness of the filtration plants. High turbidity can hinder the effectiveness of disinfectants.

**Regulatory Action Level:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

**Cryptosporidium** is a parasitic microbe found in most surface water. The SFPUC regularly tests for this waterborne pathogen, and found it at very low levels in source water and treated water in 2010. However, current test methods approved by the USEPA do not distinguish between dead organisms and those capable of causing disease. Ingestion of Cryptosporidium may produce symptoms of nausea, abdominal cramps, diarrhea, and associated headaches. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

**Secondary Drinking Water Standards (SDWS)**  
MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminations with SDWSs do not affect the health at the MCL levels.

**Variances and Exemptions**  
Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

**Waiver**  
State permission to decrease the monitoring frequency for a particular contaminant.

Additional Definitions:

**ND:** Not detectable at testing limit.

**ppm:** parts per million or milligrams per liter (mg/L)

**ppb:** parts per billion or micrograms per liter (ug/L)

**pCi/L:** picocuries per liter (a measure of radiation)

## WATER QUALITY DATA FOR YEAR 2012

				SFPUC		San Bruno			
DETECTED CONTAMINANTS	UNIT	MCL	PHG OR (MCLG)	RANGE OR LEVEL FOUND	AVERAGE OR [MAX]	RANGE OR LEVEL FOUND	AVERAGE OR [MAX]	MAJOR SOURCES IN DRINKING WATER	
TURBIDITY									
Unfiltered Hetch Hetchy Water	NTU	5	N/A	0.2 - 0.5 <sup>(1)</sup>	[2.8] <sup>(2)</sup>	N/A		Soil runoff	
Filtered Water from Sunol Valley Water Treatment Plant (SVWTP)	NTU	1 <sup>(3)</sup>	N/A	--	[0.26]				
	--	min 95% of samples ≤0.3 NTU <sup>(3)</sup>	N/A	100%	--				
Filtered Water from Harry Tracy Water Treatment Plant (HTWTP)	NTU	1 <sup>(3)</sup>	N/A	--	[0.17]				
	--	min 95% of samples ≤0.3 NTU <sup>(3)</sup>	N/A	100%	--				

<b>DISINFECTION BYPRODUCTS AND PRECURSOR</b>								
Total Trihalomethanes	ppb	80	N/A	29 - 53	[41] <sup>(4)</sup>	15 - 23.6	17.75	Byproduct of drinking water disinfection
Haloacetic Acids	ppb	60	N/A	21 - 51	[40] <sup>(4)</sup>	10 - 20.1	13.83	Byproduct of drinking water disinfection
Total Organic Carbon <sup>(5)</sup>	ppm	TT	N/A	2.3 - 3.7	2.7	N/A	N/A	Various natural and man-made sources
<b>MICROBIOLOGICAL</b>								
Total Coliform	--	NoP ≤5.0% of monthly samples	0	--	[2.7%]	0	0	Naturally present in the environment
Giardia lamblia	cyst/L	TT	0	<0.01 - 0.06	<0.01	0	0	Naturally present in the environment
<b>INORGANIC CHEMICALS</b>								
Fluoride <sup>(6)</sup>	ppm	2	1	ND - 0.8	0.3 <sup>(7)</sup>	.14 - .16	0.14	Erosion of natural deposits; water additive to promote strong teeth
Nitrate (as NO <sub>3</sub> )	ppm	45	2	N/A	N/A	ND - 5.7	3.2	Naturally-occurringorganic materials
Chromium (Cr+6)	ppm	50	N/A	N/A	N/A	ND - 10	10	Erosion of natural deposits
Chloramine <sup>(as chlorite)</sup>	ppm	MRDL=4.0	MRDL=4	0.5 - 3.3	[2.2] <sup>(8)</sup>	.5 - 3.0	2.08	Drinking water disinfectant added for treatment

CONSTITUENTS WITH SECONDARY STANDARDS	UNIT	SMCL	PHG	RANGE	AVERAGE	RANGE	AVERAGE	TYPICAL SOURCES OF CONTAMINANT
Aluminum <sup>(9)</sup>	ppb	200	600	ND - 90	ND	ND - 50	50	Erosion of natural deposits; some water treatment residue
Chloride	ppm	500	N/A	2-20	12.3	52 - 110	81.6	Runoff/leaching from natural deposits
Color	unit	15	N/A	<5 - 7	5	0 - 5	5	Naturally occurring organic materials
Specific Conductance	µS/cm	1600	N/A	31 - 344	202	500 - 780	660	Substances that form ions when in water
Sulfate	oom	500	N/A	0.9 - 40	20	23 - 80	51.3	Runoff/leaching from natural deposits
Total Dissolved Solids	ppm	1000	N/A	<20 - 195	108	280 - 570	410	Runoff/leaching from natural deposits
Turbidity	NTU	5	N/A	0.1 - 0.2	0.1	.10 - .28	0.18	Soil runoff
Iron	ppm	0.3	N/A	ND	ND	ND - .01	0.01	Leaching from natural deposits
Manganese	ppm	0.05	N/A	ND	ND	ND - .03	0.02	Leaching from natural deposits

LEAD AND COPPER <sup>(10)</sup>	UNIT	AL	PHG	RANGE	90TH PERCENTILE	RANGE	90TH PERCENTILE	MAJOR SOURCES IN DRINKING WATER
Copper	ppb	1300	300	6 - 144	60	2.6-972	550	Internal corrosion of household water plumbing systems
Lead	ppb	15	0.2	<1 - 20.8	11	<1.32	1.8	Internal corrosion of household water plumbing systems

OTHER WATER QUALITY PARAMETERS	UNIT	ORL	RANGE	AVERAGE	RANGE	AVERAGE	KEY
Alkalinity <sup>(as CaCO3)</sup>	ppm	N/A	10 - 111	61	120-200	166.6	< / ≤ = less than / less than or equal to
Bromide	ppb	N/A	<10 - 24	<10	N/A	N/A	AL = Action Level
Calcium <sup>(as Ca)</sup>	ppm	N/A	41361	15	32-58	44.3	Max = Maximum
Chlorate <sup>(11)</sup>	ppb	800 (NL)	53 - 399	221	N/A	N/A	Min = Minimum
Hardness <sup>(as CaCO3)</sup>	ppm	N/A	8 - 114	62	157-306	228	N/A = Not Available
Magnesium	ppm	N/A	0.2 - 10.8	6.1	19-39	29.3	ND = Non-Detect
pH	-	N/A	6.7 - 9.7	8.5	7.39-7.67	7.55	NL = Notification Level
Silica	ppm	N/A	3.2 - 5.3	4.1	N/A	N/A	NoP = Number of Coliform-Positive Sample
Sodium	ppm	N/A	3-25	15.7	.14-.16	0.15	NTU = Nephelometric Turbidity Unit

Footnotes:
1 ~Turbidity is measured every four hours. These are monthly average turbidity values.
2 ~ The highest turbidity of the unfiltered water in 2012 was 2.9 NTU but the water was not served to customers. The brief turbidity spike indicated in the table was not observed upstream in San Joaquin Pipelines.
3 ~ There is no MCL for turbidity. The limits are based on the TT requirements in the State drinking water regulations.
4 ~ This is the highest turbidity of the unfiltered water served to customers in 2011. This turbidity spike was the result of flow rate change, and it was not observed downstream at Alameda East.
5 ~ Total organic carbon is a precursor for disinfection byproduct formation. The TT requirement applies to the filtered water from the SVWTP only. These are compliance data for SVWTP raw water.
6 ~ The SFPUC add fluoride to an optimum level of 1.0 ppm to help prevent dental cares in consumers. The CDPH specifies the fluoride levels in the treated water to be maintained within a range of 0.8 ppm - 1.5 .
7 ~ The fluoride levels in the Hetch Hetchy and SVWTP raw water were ND and 0.2 ppm, respectively. The Hetch Hetchy & SVWTP (discharge?) treated water into the Lower Crystal Springs Reservoir, which supplies water via the San Andreas Reservoir to the HTWTP for treatment.
8 ~ This is the highest quarterly running annual average value.
9 ~ Aluminum also has an MCL of 1000 ppb.
10 ~ The most recent Lead and Copper Rule monitoring was in July 2010. 1 of 33 site samples collected at consumer taps had lead concentrations above the AL.
11 ~The detected chlorate in the treated water is a degradation byproduct of sodium hypochlorite, the primary disinfectant we use for water disinfection.

**Note:** Additional water quality data may be obtained by calling the City of San Bruno Water Division at (650) 616-7162